DIMENSION "A" AT ℄ BEARINGS = SEE "A" DIMENSION TABLE

SPAN	GIRDER	END SEGMENT 1													MID-SEGMENT										END SEGMENT 2										
		MINIMUM CONCRETE COMPR. STRENGTH		END 1 TYPE	END 2 TYPE	L	θ1 (DEG.)	θ2 (DEG.)	P1	PLAN LENGTH (ALONG ℄ GIRDER GRADE)	STRAIGHT		C.G. STRANDS	Ld	END 1 TYPE	END 2 TYPE	L	θ1 (DEG.)	θ2 (DEG.)	PLAN LENGTH (ALONG ℄ GIRDER GRADE)	STRAIGHT		C.G. STRANDS	Ld	END 1 TYPE	END 2 TYPE	L	θ1 (DEG.)	θ2 (DEG.)	P2	PLAN LENGTH (ALONG ℄ GIRDER GRADE)	STRAIGHT		C.G. STRANDS	Ld
		@ FINAL F'C (KSI)	@ RELEASE F'CI (KSI)								NO. OF STRANDS	JACKING FORCE (KIPS)	E									NO. OF STRANDS	JACKING FORCE (KIPS)	E									NO. OF STRANDS	JACKING FORCE (KIPS)	E	

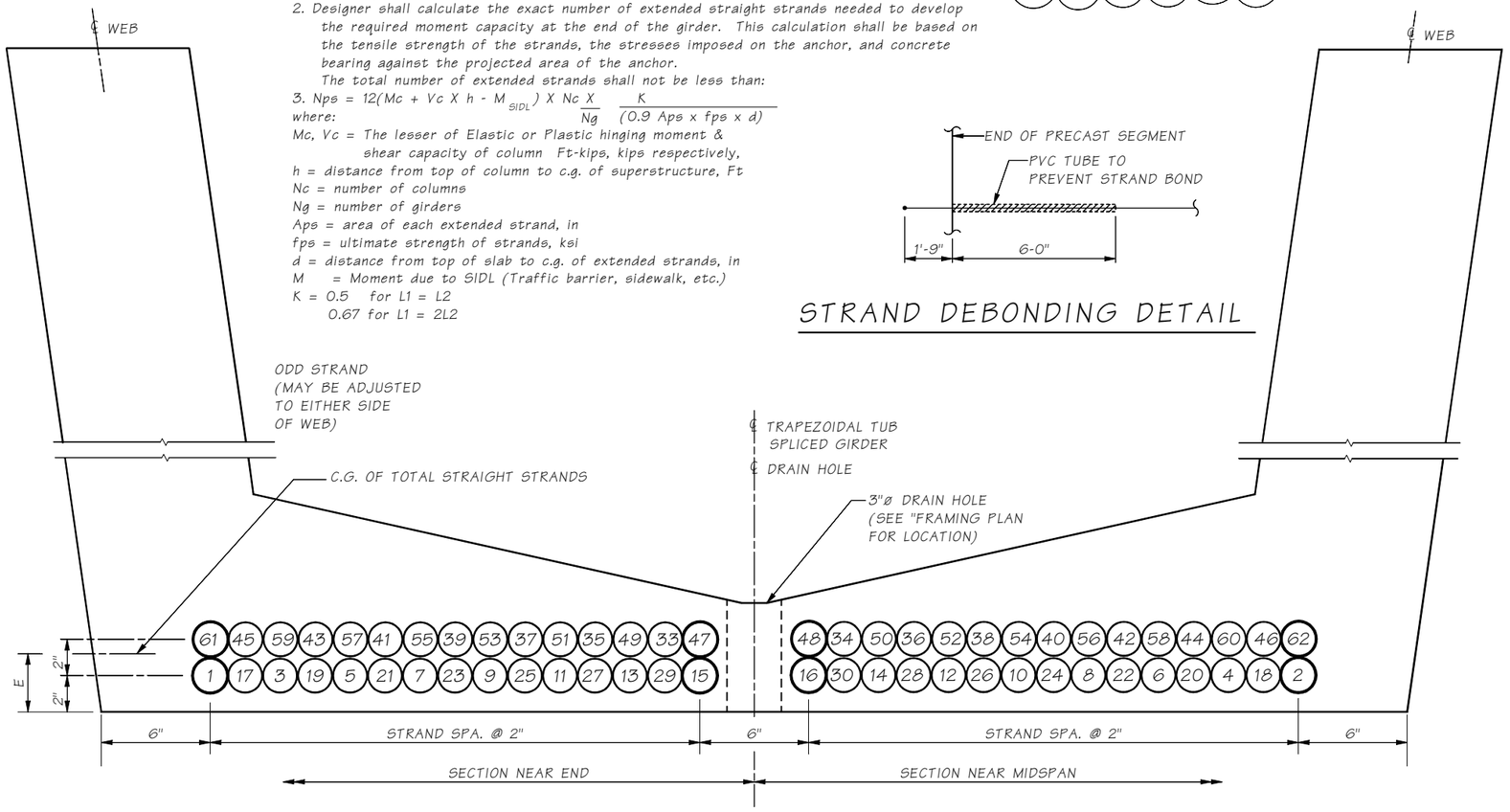
NOTES TO DESIGNER:

1. This strand extension detail is to be used for continuous spans at moment resisting diaphragms only.This detail is not applicable to continuous spans using hinge diaphragms.
2. Designer shall calculate the exact number of extended straight strands needed to develop the required moment capacity at the end of the girder. This calculation shall be based on the tensile strength of the strands, the stresses imposed on the anchor, and concrete bearing against the projected area of the anchor.
   The total number of extended strands shall not be less than:
3. $Nps = 12(Mc + Vc \times h - M_{SIDL}) \times Nc \frac{X}{Ng} \frac{K}{(0.9\ Aps \times fps \times d)}$

where:
Mc, Vc = The lesser of Elastic or Plastic hinging moment & shear capacity of column Ft-kips, kips respectively,
h = distance from top of column to c.g. of superstructure, Ft
Nc = number of columns
Ng = number of girders
Aps = area of each extended strand, in
fps = ultimate strength of strands, ksi
d = distance from top of slab to c.g. of extended strands, in
M = Moment due to SIDL (Traffic barrier, sidewalk, etc.)
K = 0.5 for L1 = L2
0.67 for L1 = 2L2

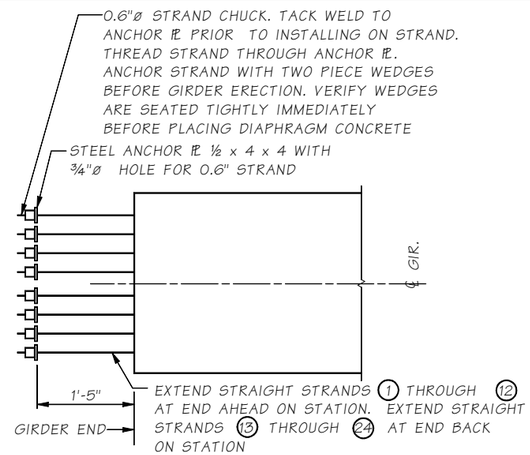
NOTE:
Dimensions shall be shown in Imperial units to the nearest 1/8th inch.

STRAND DEBONDING DETAIL

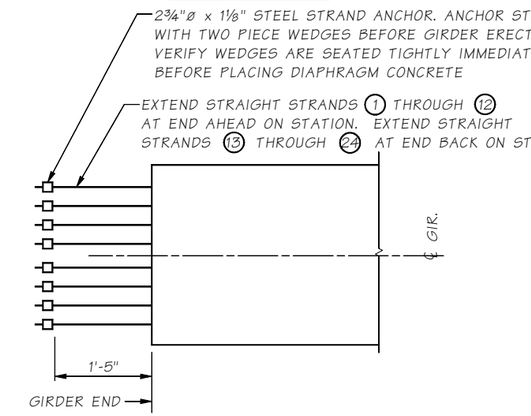


STRAND PATTERN

STRAND LOCATION SEQUENCE SHALL BE AS SHOWN (1), (2) ETC.



ALTERNATE # 1



ALTERNATE # 2

STRAND EXTENSION DETAIL FOR END TYPE D

NOT ALL EXTENDED STRANDS ARE SHOWN

Bridge Design Engr.	M:\STANDARDS\Girders\PT Trapezoidal Tubs\PT_TRAPEZOIDAL TUB 5.MAN				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor					10	WASH.			
Designed By					JOB NUMBER				
Checked By									
Detailed By									
Bridge Projects Engr.									
Prelim. Plan By									
Architect/Specialist	DATE	REVISION	BY	APP'D					

BRIDGE AND STRUCTURES OFFICE

Washington State Department of Transportation

STANDARD PRESTRESSED CONCRETE GIRDERS

TUB SPLICED GIRDER DETAILS 5 OF 5

BRIDGE SHEET NO.

SHEET OF SHEETS

SR JOB NO. SHEET

5.9-A4-6

Tue Apr 29 13:49:17 2008